

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/GB2005/000416

International filing date (day/month/year)
04.02.2005

Priority date (day/month/year)
06.02.2004

International Patent Classification (IPC) or both national classification and IPC
B05B11/00

Applicant
GLAXO GROUP LIMITED

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
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Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-39
Inventive step (IS)	Yes: Claims	
	No: Claims	1-39
Industrial applicability (IA)	Yes: Claims	1-39
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V.

- 1 Reference is made to the following documents:
D1 : US 4 776 498 A (MAERTE ET AL) 11 October 1988 (1988-10-11)
D2 : US 5 024 355 A (JOUILLAT ET AL) 18 June 1991 (1991-06-18)

- 2 Document D1 discloses (the references in parentheses applying to this document):
A metering pump system for metering and pumping a metered volume of a fluid product having:
 - (a) a storage chamber (2) for storing the fluid product in;
 - (b) a metering chamber (20) which is movable between a contracted state and an expanded state, wherein the system is adapted such that movement of the metering chamber from its contracted state to its expanded state results in the metering chamber being placed in fluid communication with the storage chamber to enable the metering chamber to receive an excess volume of the fluid product comprising the metered volume and a surplus volume from the storage chamber and movement of the metering chamber from its expanded state to its contracted state causes the metered volume to be pumped from the metering chamber;
 - (c) a bleed mechanism (33) for bleeding the surplus volume from the metering chamber as it moves from the expanded state to the contracted state; and
 - (d) an inlet valve mechanism (23, 30, 27) which is disposed between the storage and metering chambers and movable between an open state, to permit flow of the fluid product from the storage chamber to the metering chamber through the inlet valve mechanism, and a closed state, to prevent flow of the fluid product between the storage and metering chambers through the inlet valve mechanism;wherein:
 - (e) the inlet valve mechanism is adapted so that it remains in its closed state except when the metering chamber moves from the contracted state to its expanded state.

2.1 INDEPENDENT CLAIM 1

As can be seen from the above, document D1 discloses in combination all the features defined in independent claim 1. Hence the subject-matter of this claim is not new (Article

33(2) PCT).

2.2 INDEPENDENT CLAIM 2

As can be seen from the above, document D1 discloses in combination all the features defined in independent claim 2. Hence the subject-matter of this claim is not new (Article 33(2) PCT).

2.3 INDEPENDENT CLAIM 3

As can be seen from the above, document D1 discloses in combination all the features defined in independent claim 3. Hence the subject-matter of this claim is not new (Article 33(2) PCT).

3 Document D2 discloses, see e.g. fig.9 and fig. 10 (the references in parentheses applying to this document):

A metering pump system for metering and pumping a metered volume of a fluid product having:

- (a) a storage chamber (9) for storing the fluid product in;
- (b) a metering chamber (C) which is movable between a contracted state and an expanded state, wherein the system is adapted such that movement of the metering chamber from its contracted state to its expanded state results in the metering chamber being placed in fluid communication with the storage chamber to enable the metering chamber to receive an excess volume of the fluid product comprising the metered volume and a surplus volume from the storage chamber and movement of the metering chamber from its expanded state to its contracted state causes the metered volume to be pumped from the metering chamber;
- (c) a bleed mechanism (11a) for bleeding the surplus volume from the metering chamber as it moves from the expanded state to the contracted state; and
- (d) an inlet valve mechanism constituted by a flexible lip (39) which is disposed between the storage and metering chambers and movable between an open state, to permit flow of the fluid product from the storage chamber to the metering chamber through the inlet valve mechanism, and a closed state, to prevent flow of the fluid product between the storage and metering chambers through the inlet valve mechanism; wherein:

(e) the inlet valve mechanism, thanks to the flexible material and the orientation of lip (39), is adapted so that it remains in its closed state except when the metering chamber moves from the contracted state to its expanded state.

3.1 INDEPENDENT CLAIM 1

As can be seen from the above, document D2 discloses in combination all the features defined in independent claim 1. Hence the subject-matter of this claim is not new (Article 33(2) PCT).

3.2 INDEPENDENT CLAIM 2

As can be seen from the above, document D2 discloses in combination all the features defined in independent claim 2. Hence the subject-matter of this claim is not new (Article 33(2) PCT).

3.3 INDEPENDENT CLAIM 3

As can be seen from the above, document D2 discloses in combination all the features defined in independent claim 3. Hence the subject-matter of this claim is not new (Article 33(2) PCT).

4 DEPENDENT CLAIMS 4-39

Dependent claims 4-39 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT) for the following reasons:

4.1 The subject matter of claims 4-17,19,20,24-34,36-37 is already known from D1 and is therefore not new (see search report).

4.2 The subject matter of claims 18, 21-23 and 35 is already known from D2 and is therefore not new (see search report).

4.3 Claims 38 and 39 do not fulfill the requirements of Rule 6.2 (a) PCT and are

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therefore not admissible.